CLAIM

1. A method for manufacturing a semiconductor device, comprising the steps of:
forming a first insulating film by discharging a composition including an insulator;
forming a second insulating film over the first insulating film;
forming a mask pattern by performing light-exposure and development on the second insulating film; and
forming an opening by etching the first insulating film by using the second insulating film as a mask.

2. A method for manufacturing a semiconductor device, comprising the steps of:
forming a first insulating film by discharging a composition including an insulator;
forming a second insulating film by selectively discharging a composition over the first insulating film; and
forming an opening by etching the first insulating film by using the second insulating film as a mask.

3. A method for manufacturing a semiconductor device, comprising the steps of:
forming a first insulating film by discharging a composition over a thin film transistor, the composition including an insulator;
forming a second insulating film over the first insulating film;
forming a mask pattern by performing light-exposure and development on the second insulating film; and
forming an opening by etching the first insulating film by using the second insulating film as a mask.
forming at least one opening by etching the first insulating film by using the second insulating film as a mask wherein the opening reaches one of source and drain regions of the thin film transistor;
forming a conductive layer over the first insulating film wherein the conductive layer is connected to the one of the source and drain regions through the opening.

4. A method for manufacturing a semiconductor device, comprising the steps of:

forming a first insulating film by discharging a composition over a thin film transistor, the composition including an insulator;

forming a second insulating film over the first insulating film;

forming a mask pattern by performing light-exposure and development on the second insulating film; and

forming an opening by etching the first insulating film by using the second insulating film as a mask.

forming at least one opening by etching the first insulating film by using the second insulating film as a mask wherein the opening reaches one of source electrode and drain electrode of the thin film transistor;

forming a conductive layer over the first insulating film wherein the conductive layer is connected to the one of the source electrode and drain electrode through the opening.

5. A method for manufacturing a semiconductor device, comprising the steps of:

forming a first insulating film by discharging a composition over a thin film transistor, the composition including an insulator;

forming a second insulating film over the first insulating film;

forming a mask pattern by performing light-exposure and development on the second insulating film; and

forming an opening by etching the first insulating film by using the second insulating film as a mask.

forming at least one opening by etching the first insulating film by using the second insulating film as a mask wherein the opening reaches one of source and drain regions of the thin film transistor;

forming a conductive layer over the first insulating film wherein the conductive layer is connected to the one of the source and drain regions through the opening.

forming a pixel electrode electrically connected to the conductive layer.

6. A method for manufacturing a semiconductor device, comprising the steps of:

forming a first insulating film by discharging a composition over a thin film transistor, the composition including an insulator;

forming a second insulating film over the first insulating film;

forming a mask pattern by performing light-exposure and development on the second insulating film; and

forming an opening by etching the first insulating film by using the second insulating film as a mask.

forming at least one opening by etching the first insulating film by using the second insulating film as a mask wherein the opening reaches one of source electrode and drain electrode of the thin film transistor;

forming a conductive layer over the first insulating film wherein the conductive layer is connected to the one of the source electrode and drain electrode through the opening.

forming a pixel electrode electrically connected to the conductive layer.

7. The method for manufacturing a semiconductor device according to claim 3, wherein the conductive layer is formed by discharging.

8 The method for manufacturing a semiconductor device according to claim 4 wherein the conductive layer is formed by discharging.

9 The method for manufacturing a semiconductor device according to claim 5 wherein the conductive layer is formed by discharging.

10The method for manufacturing a semiconductor device according to claim 6 wherein the conductive layer is formed by discharging.

11. The method for manufacturing a semiconductor device according to claim 1, wherein the opening formed in the first insulating film having a tapered shape, and an inert element is added to the first insulating film.

12. The method for manufacturing a semiconductor device according to claim 2, wherein the opening formed in the first insulating film having a tapered shape, and an inert element is added to the first insulating film.

13. The method for manufacturing a semiconductor device according to claim 3, wherein the opening formed in the first insulating film having a tapered shape, and an inert element is added to the first insulating film.

14. The method for manufacturing a semiconductor device according to claim 4, wherein the opening formed in the first insulating film having a tapered shape, and an inert element is added to the first insulating film.

15. The method for manufacturing a semiconductor device according to claim 5, wherein the opening formed in the first insulating film having a tapered shape, and an inert element is added to the first insulating film.

16. The method for manufacturing a semiconductor device according to claim 6, wherein the opening formed in the first insulating film having a tapered shape, and an inert element is added to the first insulating film.

17. The method for manufacturing a semiconductor device according to claim 11, wherein the inert element is one or plural kinds selected from helium (He), neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe).

18. The method for manufacturing a semiconductor device according to claim 12, wherein the inert element is one or plural kinds selected from helium (He), neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe).

19. The method for manufacturing a semiconductor device according to claim 13,

wherein the inert element is one or plural kinds selected from helium (He), neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe).

20. The method for manufacturing a semiconductor device according to claim 14, wherein the inert element is one or plural kinds selected from helium (He), neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe).

21. The method for manufacturing a semiconductor device according to claim 15, wherein the inert element is one or plural kinds selected from helium (He), neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe).

22. The method for manufacturing a semiconductor device according to claim 16, wherein the inert element is one or plural kinds selected from helium (He), neon (Ne), argon (Ar), krypton (Kr) and xenon (Xe).

23. The method for manufacturing a semiconductor device according to claim 1, wherein a barrier layer is formed by selectively discharging a composition to a side surface of the opening.

24. The method for manufacturing a semiconductor device according to claim 2, wherein a barrier layer is formed by selectively discharging a composition to a side surface of the opening.

25. The method for manufacturing a semiconductor device according to claim 3, wherein a barrier layer is formed by selectively discharging a composition to a side surface of the opening.

26. The method for manufacturing a semiconductor device according to claim 4, wherein a barrier layer is formed by selectively discharging a composition to a side surface of the opening.

27. The method for manufacturing a semiconductor device according to claim 5, wherein a barrier layer is formed by selectively discharging a composition to a side surface of the opening.

28. The method for manufacturing a semiconductor device according to claim 6, wherein a barrier layer is formed by selectively discharging a composition to a side surface of the opening.

29. The method for manufacturing a semiconductor device according to claim 1, wherein a conductive film is formed by discharging a composition over the opening, and wherein a barrier layer is formed by selectively discharging a composition over the conductive film.

30. The method for manufacturing a semiconductor device according to claim 2, wherein a conductive film is formed by discharging a composition over the opening, and wherein a barrier layer is formed by selectively discharging a composition over the conductive film.

31. The method for manufacturing a semiconductor device according to claim 3, wherein a conductive film is formed by discharging a composition over the opening, and wherein a barrier layer is formed by selectively discharging a composition over the conductive film.

32. The method for manufacturing a semiconductor device according to claim 4, wherein a conductive film is formed by discharging a composition over the opening, and wherein a barrier layer is formed by selectively discharging a composition over the conductive film.

33. The method for manufacturing a semiconductor device according to claim 5,

wherein a conductive film is formed by discharging a composition over the opening, and wherein a barrier layer is formed by selectively discharging a composition over the conductive film.

34. The method for manufacturing a semiconductor device according to claim 6, wherein a conductive film is formed by discharging a composition over the opening, and wherein a barrier layer is formed by selectively discharging a composition over the conductive film.

35. The method for manufacturing a semiconductor device according to claim 23, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

36. The method for manufacturing a semiconductor device according to claim 24, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

37. The method for manufacturing a semiconductor device according to claim 25, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

38. The method for manufacturing a semiconductor device according to claim 26, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

39. The method for manufacturing a semiconductor device according to claim 27,

wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

40. The method for manufacturing a semiconductor device according to claim 28, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

41. The method for manufacturing a semiconductor device according to claim 29, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

42. The method for manufacturing a semiconductor device according to claim 30, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

43. The method for manufacturing a semiconductor device according to claim 31, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

44. The method for manufacturing a semiconductor device according to claim 32, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

45. The method for manufacturing a semiconductor device according to claim 33,

wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

46. The method for manufacturing a semiconductor device according to claim 34, wherein the barrier layer comprises a resin including a monomer which comprises a fluorine atom within a molecule, or a resin including a monomer which comprises only a carbon atom and a hydrogen atom.

47. The method for manufacturing a semiconductor device according to claim 1, wherein the first insulating film comprises one or plural kinds selected from polyimide, acrylic, benzocyclobutene and polyamide.

48. The method for manufacturing a semiconductor device according to claim 2, wherein the first insulating film comprises one or plural kinds selected from polyimide, acrylic, benzocyclobutene and polyamide.

49. The method for manufacturing a semiconductor device according to claim 3, wherein the first insulating film comprises one or plural kinds selected from polyimide, acrylic, benzocyclobutene and polyamide.

50. The method for manufacturing a semiconductor device according to claim 4, wherein the first insulating film comprises one or plural kinds selected from polyimide, acrylic, benzocyclobutene and polyamide.

51. The method for manufacturing a semiconductor device according to claim 5, wherein the first insulating film comprises one or plural kinds selected from polyimide, acrylic, benzocyclobutene and polyamide.

52. The method for manufacturing a semiconductor device according to claim 6,

wherein the first insulating film comprises one or plural kinds selected from polyimide, acrylic, benzocyclobutene and polyamide.

53. The method for manufacturing a semiconductor device according to claim 1, wherein the first insulating film comprises a material in which a skeletal structure is configured by the bond of silicon and oxygen.

54. The method for manufacturing a semiconductor device according to claim 2, wherein the first insulating film comprises a material in which a skeletal structure is configured by the bond of silicon and oxygen.

55. The method for manufacturing a semiconductor device according to claim 3, wherein the first insulating film comprises a material in which a skeletal structure is configured by the bond of silicon and oxygen.

56. The method for manufacturing a semiconductor device according to claim 4, wherein the first insulating film comprises a material in which a skeletal structure is configured by the bond of silicon and oxygen.

57. The method for manufacturing a semiconductor device according to claim 5, wherein the first insulating film comprises a material in which a skeletal structure is configured by the bond of silicon and oxygen.

58. The method for manufacturing a semiconductor device according to claim 6, wherein the first insulating film comprises a material in which a skeletal structure is configured by the bond of silicon and oxygen.

59. The method for manufacturing a semiconductor device according to claim 1, wherein the first insulating film is formed so that the inert gas is included at a concentration of from 1×10^{19} atoms/cm^3 to 5×10^{21} atoms/cm^3.

60. The method for manufacturing a semiconductor device according to claim 2, wherein the first insulating film is formed so that the inert gas is included at a concentration of from 1×10^{19} atoms/cm^3 to 5×10^{21} atoms/cm^3.

61. The method for manufacturing a semiconductor device according to claim 3, wherein the first insulating film is formed so that the inert gas is included at a concentration of from 1×10^{19} atoms/cm^3 to 5×10^{21} atoms/cm^3.

62. The method for manufacturing a semiconductor device according to claim 4, wherein the first insulating film is formed so that the inert gas is included at a concentration of from 1×10^{19} atoms/cm^3 to 5×10^{21} atoms/cm^3.

63. The method for manufacturing a semiconductor device according to claim 5, wherein the first insulating film is formed so that the inert gas is included at a concentration of from 1×10^{19} atoms/cm^3 to 5×10^{21} atoms/cm^3.

64. The method for manufacturing a semiconductor device according to claim 6, wherein the first insulating film is formed so that the inert gas is included at a concentration of from 1×10^{19} atoms/cm^3 to 5×10^{21} atoms/cm^3.

65. The method for manufacturing a semiconductor device according to claim 1, wherein planarizing treatment is performed after forming the first insulating film by discharging a composition comprising an insulator.

66. The method for manufacturing a semiconductor device according to claim 2, wherein planarizing treatment is performed after forming the first insulating film by discharging a composition comprising an insulator.

67. The method for manufacturing a semiconductor device according to claim 3,

wherein planarizing treatment is performed after forming the first insulating film by discharging a composition comprising an insulator.

68. The method for manufacturing a semiconductor device according to claim 4, wherein planarizing treatment is performed after forming the first insulating film by discharging a composition comprising an insulator.

69. The method for manufacturing a semiconductor device according to claim 5, wherein planarizing treatment is performed after forming the first insulating film by discharging a composition comprising an insulator.

70. The method for manufacturing a semiconductor device according to claim 6, wherein planarizing treatment is performed after forming the first insulating film by discharging a composition comprising an insulator.

71. The method for manufacturing a semiconductor device according to claim 1, wherein a conductive film which fills the opening is formed by discharging a composition including a conductive material to the opening of the first insulating film.

72. The method for manufacturing a semiconductor device according to claim 2, wherein a conductive film which fills the opening is formed by discharging a composition including a conductive material to the opening of the first insulating film.

73. The method for manufacturing a semiconductor device according to claim 3, wherein a conductive film which fills the opening is formed by discharging a composition including a conductive material to the opening of the first insulating film.

74. The method for manufacturing a semiconductor device according to claim 4, wherein a conductive film which fills the opening is formed by discharging a composition including a conductive material to the opening of the first insulating film.

75. The method for manufacturing a semiconductor device according to claim 5, wherein a conductive film which fills the opening is formed by discharging a composition including a conductive material to the opening of the first insulating film.

76. The method for manufacturing a semiconductor device according to claim 6, wherein a conductive film which fills the opening is formed by discharging a composition including a conductive material to the opening of the first insulating film.

77. The method for manufacturing a semiconductor device according to claim 71, wherein the conductive film comprises a material including silver, gold, copper or indium tin oxide.

78. The method for manufacturing a semiconductor device according to claim 72, wherein the conductive film comprises a material including silver, gold, copper or indium tin oxide.

79. The method for manufacturing a semiconductor device according to claim 73, wherein the conductive film comprises a material including silver, gold, copper or indium tin oxide.

80. The method for manufacturing a semiconductor device according to claim 74, wherein the conductive film comprises a material including silver, gold, copper or indium tin oxide.

81. The method for manufacturing a semiconductor device according to claim 75, wherein the conductive film comprises a material including silver, gold, copper or indium tin oxide.

82. The method for manufacturing a semiconductor device according to claim 76,

wherein the conductive film comprises a material including silver, gold, copper or indium tin oxide.

83. The method for manufacturing a semiconductor device according to claim 1, wherein the opening formed in the first insulating film having a tapered shape.

84. The method for manufacturing a semiconductor device according to claim 2, wherein the opening formed in the first insulating film having a tapered shape.

85. The method for manufacturing a semiconductor device according to claim 3, wherein the opening formed in the first insulating film having a tapered shape.

86. The method for manufacturing a semiconductor device according to claim 4, wherein the opening formed in the first insulating film having a tapered shape.

87. The method for manufacturing a semiconductor device according to claim 5, wherein the opening formed in the first insulating film having a tapered shape.

88. The method for manufacturing a semiconductor device according to claim 6, wherein the opening formed in the first insulating film having a tapered shape.

89. The method for manufacturing a semiconductor device according to claim 1, wherein an inert element is added the first insulating film.

90. The method for manufacturing a semiconductor device according to claim 2, wherein an inert element is added the first insulating film.

91. The method for manufacturing a semiconductor device according to claim 3, wherein an inert element is added the first insulating film.

92. The method for manufacturing a semiconductor device according to claim 4, wherein an inert element is added the first insulating film.

93. The method for manufacturing a semiconductor device according to claim 5, wherein an inert element is added the first insulating film.

94. The method for manufacturing a semiconductor device according to claim 6, wherein an inert element is added the first insulating film.

95. The method of manufacturing an electronic device comprising incorporating into the semiconductor device according to claim 1, wherein the semiconductor device includes a display device, a computer, a cellular phone, a PDA, a camera, or the like.

96. The method of manufacturing an electronic device comprising incorporating into the semiconductor device according to claim 2, wherein the semiconductor device includes a display device, a computer, a cellular phone, a PDA, a camera, or the like.

97. The method of manufacturing an electronic device comprising incorporating into the semiconductor device according to claim 3, wherein the semiconductor device includes a display device, a computer, a cellular phone, a PDA, a camera, or the like.

98. The method of manufacturing an electronic device comprising incorporating into the semiconductor device according to claim 4, wherein the semiconductor device includes a display device, a computer, a cellular phone, a PDA, a camera, or the like.

99. The method of manufacturing an electronic device comprising incorporating into the semiconductor device according to claim 5, wherein the semiconductor device includes a display device, a computer, a cellular phone, a PDA, a camera, or the like.

100. The method of manufacturing an electronic device comprising incorporating into

the semiconductor device according to claim 6, wherein the semiconductor device includes a display device, a computer, a cellular phone, a PDA, a camera, or the like.